**In-class Assignment**

1. **Constant & Basic Operation**

**Task**: write a script to define two constants, x and y, with values of your choice.

* Perform and print the results of at least four different operations (addition, subtraction, multiplication, division)
* Calculate and print the square *(tf.square)* and cube *(tf.pow)* of a number.
* A screenshot of a computer code

  Description automatically generated

1. **Eager Execution vs. Graph Execution**

* Run a simple TensorFlow operation in eager execution mode.
* Convert it to a TensorFlow graph using @tf.function.
* Compare execution time for both modes.
* **Question: Which execution mode is *faster* and why?**

**A screenshot of a computer

Description automatically generated**

Answer:

Graph execution is faster than eager execution because TensorFlow compiles the computation into a static graph, allowing optimizations and reducing the overhead of Python function calls during repeated execution

Eager Execution Result: 50.0, Time: 0.517116 seconds

* **Graph Execution Result: 50.0, Time: 3.400123 seconds**